# 難関国公立大　英語

この講座は，地方国公立～旧帝大を想定した難関大学を志望する生徒のための講座です。

夏期講習でも何も変わらないのが，根本の英語力を底上げすること。それには，予習→授業→復習のサイクルと，復習の際の音読十回と単語の暗記です。

一方で，それに加えて，難関大学で頻出の自由英作文も扱います。自由英作文の基本は扱わないので，講義を受ける前に，高３トップ＆ハイレベル英語～英作文編～第４講　自由英作文編の序章を使用して，自由英作文の型を学んできてください。

肘井　学

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＊第４講の授業に入る前に，スタディサプリの高３トップ＆ハイレベル英語〜英作文編〜
第４講　自由英作文編の序章を見てきてください。

# 第１講　難関国公立大英語長文①

**ポイント**

【1】具体の発見
【2】抽象の発見
【3】パラフレーズの発見

次の英文を読んで，以下の問いに答えよ。

Natural selection occurs because of the reproductive advantages of some individuals. This view of the world implies that all individuals are in competition with each other and will behave to (1) further their own interests. From a philosophical viewpoint, the idea that the world is full of selfish individuals clashes with many of the values we hold for human societies, such as cooperation, community spirit, and selflessness. Does the variety of behaviors that we observe in animals, even the (2) apparently cooperative ones, really arise from the interactions of selfish individuals? Can traits evolve that favor the larger interests of a group or society? Does evolution lead only to selfishness? These are key questions that interest social scientists, philosophers, and biologists. (a) Biologists do not think that individuals ever act for the good of the species, but there are many situations in which what appear to be selfish individual behaviors actually benefit a group.

It is easy to imagine that populations of selfish individuals might overexploit the available resources and become extinct, whereas populations that have evolved social behaviors preventing overexploitation of resources

might have better long-term survival prospects. Natural selection for traits that favor groups rather than individuals is termed group selection.

*NOTE*

The idea that groups of animals could evolve self-regulating mechanisms that prevent overexploitation of their food resources was first argued in detail in 1,962 by (b) V. C. Wynne Edwards, an ecologist in Scotland. Despite its intuitive appeal, group selection is not considered very important in producing changes in species traits. Group selection operates much more slowly than individual selection, making it a much weaker selective force in most circumstances.

Imagine, for example, a species of bird, such as the puffin that lives in large colonies and lays only a single egg. Could laying a single egg have evolved in puffins by group selection to limit population growth and maintain an adequate food supply for the long-term good of the puffin colony? The answer is no. Any genetic change that increased the number of eggs laid would be favored only if individuals laying two eggs leave more copies of their genes to the next generation, compared with birds laying a single egg. But ecologically speaking, costs would increase as well as benefits. A puffin with two eggs would have to collect more calcium to lay two eggs and would have to fly more to feed two young. There are ecological costs to increasing (3) the clutch size in puffins. Consequently, genes for laying two eggs would not spread through the population unless the benefits would exceed (c) the costs.

*NOTE*

Individual selection favors the small clutch size in puffins. Short-term advantages to selfish individuals will develop much more quickly than long-term advantages to the group, so it is difficult to see how traits favored by group selection can be maintained in a population unless they are also favored by individual selection.

But this does not mean that all behavior must be selfish and that (4) altruism does not exist. To understand apparently cooperative behaviors that benefit the group or society, we need to look for the benefits to individuals. Individual selection can produce behaviors that are a benefit for the group.

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*NOTE*

問１　下線部（1)～(4）の語（句）の本文中での意味に最も近い表現を，下からそれぞれ一つ選び，記号で答えなさい。

(1) further

(あ) control　　(い) promote　　(う) separate　　(え) throw away

(2) apparently

(あ) certainly　　(い) clearly　　(う) oddly　　(え) seemingly

(3) the clutch size

(あ) the amount of available food resources

(い) the distance of flight required to obtain food

(う) the quantity of eggs laid in a single nest

(え) the size of a colony in one area

(4) altruism

(あ) egoism　　(い) helplessness

(う) individualism　　(え) selflessness

問２　下線部（a）を日本語に訳しなさい。

問３　下線部（b）の V. C. Wynne Edwards の考えはどういうものか，50字以内の日本語で説明しなさい。ただし，句読点も１字に数えます。

問４　下線部（c）の具体例を50字以内の日本語で書きなさい。ただし，句読点も１字に数えます。

## 復習テスト　第１講

＊次の見出し語（句・文）に合う選択肢を選びなさい。

1. 自然淘汰
① human selection　② individual selection
③ natural selection　④ group selection

2. 競争
① company　② competition　③ cooperation　④ completion

3. 関わり合い
① interception　② intersection
③ international　④ interaction

4. 進化する
① evolve　② envy　③ involve　④ revolve

5. 利己的な
① altruism　② serene　③ selflessness　④ selfish

6. 利他主義
① altruism　② serene　③ egoism　④ selfish

7. 絶滅した
① extravagant　② exploitation　③ extinct　④ extrovert

8. 仕組み
① momentous　② mechanism　③ meaning　④ mentality

9. 維持する
① contain　② certain　③ entertain　④ maintain

# 第１講　解答

<解答>

問１　(1) い　(2) え　(3) う　(4) え

問２　全訳の下線部を参照。

問３　動物の集団が，食糧資源の過剰搾取を防ぐ自己規制の仕組みを進化させる可能性があるという考え。(45 字)

問４　二つ卵を産むのに，より多くのカルシウムを蓄え、二羽のひなを育てる為に、より多く飛ぶ必要があること。(49 字)

<全訳>

自然淘汰は，一部の個体が生殖上の利点を持つために起こる。この世界観には，あらゆる個体がお互いに競争していて，自分自身の利益を追求するように振る舞うという考えがある。哲学的観点からは，世界が利己的な個体で満ちているという考えは，協力，共同体意識，無私無欲のような人間社会にある価値観の多くと衝突する。私たちが動物の社会で観察する類の行動は，一見協力的な行為ですら，実際は利己的な個体の相互作用から生じるのか。集団や社会というより大きな利益を好む習性は進化できるのか。進化は利己心にしかつながらないのか。これらは，社会科学者，哲学者，そして生物学者の関心を集める重要な問題である。生物学者は，個体が種の利益のために行動することは決してないと考えているが，個体の利己的な行動に見えるものが，実際には集団に利益をもたらす状況はたくさんある。

利己的な個体は利用できる資源を過剰に搾取して絶滅するかもしれないが，一方で資源の過剰搾取を防ぐ社会的行動を進化させた個体は，より長く生存する可能性があるかもしれないと想像するのは容易いことだ。個体より集団を好む習性を表す自然淘汰は，群淘汰と呼ばれている。動物の集団が食糧資源の過剰搾取を防ぐ自己規制の仕組みを進化させるという考えは，1962 年に，V.C. ウィン・エドワーズというスコットランドの生態学者が，初めて詳細に主張した。群淘汰には直観的な魅力があるのだが，種の習性の変化を生み出すのにそんなに重要だと見なされていない。群淘汰は，個体の淘汰よりずっとゆっくり進み，ほとんどの状況で，その力をずっと弱いものにしている。

たとえば，大きなコロニーの中で生息し，一つしか卵を産まないパフィンのような鳥の種を想像してみよう。一つしか卵を産まないことによって，個体の増加を制限し，コロニーの長期にわたる利益のために適切な食料供給を維持する群淘汰によって，パ

フィンは進化できただろうか。答えはノーだ。産み落とす卵を増やすどんな遺伝的な変化であれ, 好まれるのは, 一つしか卵を産まない鳥と比べて, 二つの卵を産む個体が, より多くの遺伝子のコピーを次の世代に残した場合のみだ。しかし，生態学的に言うと，利益だけではなく，犠牲も増えるだろう。二つの卵を産むパフィンは，その卵を産むのに，より多くのカルシウムを集めなければならないし，二羽のひなを育てるのに，より多く飛ばなければならないだろう。パフィンの一回当たりの生産繁殖体数を増やすのに，生態学的な犠牲が存在する。結果として，二つの卵を産む遺伝子は，利益が犠牲を上回らない限り，世代を超えて広がることはないだろう。個体の淘汰は，パフィンのわずかな生産繁殖体数を好む。利己的な個体への短期間の利益は，集団に対する長期間の利益よりずっと早く発達するだろうから，その習性が個体淘汰に好まれない限りは，群淘汰が好む習性が，個体群の中で維持される様を見るのは難しい。

　しかしこのことは，あらゆる行為が利己的で，利他が存在しないことを意味するのではない。社会や集団のためになる，一見すると協力的な行為を理解するには，個体への利益を探す必要がある。個体淘汰は，集団の利益となる行動を作り出すことができる。

## 第１講　重要語彙リスト　　＊一つ一つ何度も繰り返して，覚えてください

| | | |
|---|---|---|
| 1 | natural selection | 自然淘汰 |
| 2 | reproductive | 生殖の |
| 3 | imply | ～という意味（考え），含む |
| 4 | competition | 競争 |
| 5 | further | ～を促進する |
| 6 | interest | 利益 |
| 7 | philosophical | 哲学の |
| 8 | selfish | 利己的な |
| 9 | clash | 衝突する |
| 10 | community spirit | 共同体意識 |
| 11 | apparently | 一見すると |
| 12 | arise from | ～から生じる |
| 13 | trait | 習性 |
| 14 | evolve | 進化する |
| 15 | good | 利益 |
| 16 | available | 利用できる |
| 17 | extinct | 絶滅した |
| 18 | whereas | 一方で |
| 19 | prospect | 見通し |
| 20 | mechanism | 仕組み |
| 21 | argue | 主張する |
| 22 | in detail | 詳細に |
| 23 | ecologist | 生態学者 |
| 24 | intuitive | 直観的な |
| 25 | operate | 働く |
| 26 | colony | コロニー |
| 27 | adequate | 十分な |
| 28 | genetic | 遺伝的な |
| 29 | generation | 世代 |
| 30 | compared with | ～と比べると |
| 31 | cost | 犠牲 |
| 32 | consequently | 結果として |
| 33 | gene | 遺伝子 |
| 34 | unless ～ | ～しない限り |
| 35 | altruism | 利他主義 |

**第１講　音読用白文**　　①　②　③　④　⑤　⑥　⑦　⑧　⑨　⑩

Natural selection occurs because of the reproductive advantages of some individuals. This view of the world implies that all individuals are in competition with each other and will behave to further their own interests. From a philosophical viewpoint, the idea that the world is full of selfish individuals clashes with many of the values we hold for human societies, such as cooperation, community spirit, and selflessness. Does the variety of behaviors that we observe in animals, even the apparently cooperative ones, really arise from the interactions of selfish individuals? Can traits evolve that favor the larger interests of a group or society? Does evolution lead only to selfishness? These are key questions that interest social scientists, philosophers, and biologists. Biologists do not think that individuals ever act for the good of the species, but there are many situations in which what appear to be selfish individual behaviors actually benefit a group.

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# 復習テスト　解答

<第 1 講>

| | | | | |
|---|---|---|---|---|
| 1. ③ | 2. ② | 3. ④ | 4. ① | 5. ④ |
| 6. ① | 7. ③ | 8. ② | 9. ④ | |